

Remarks

Claims 1-9, 13-19, and 28-46, and 56-64 are pending in the application. Claims 10-12, 20-27, and 47-55 were withdrawn from consideration based on an election of species requirement. Claims 1, 40, and 56 have been amended. No new matter has been added by virtue of this response. Reconsideration of the application in view of this response is requested.

Allowable Claims

Applicant thanks the examiner for the allowance of claims 35 and 39 if rewritten in independent form including all the limitations of the base claim and any intervening claims. However, applicant believes that claim 1, as amended makes the base claim allowable.

Claim Rejections— 35 U.S.C. § 102(b)

The Examiner rejects claims 1-5, 7, 13, 15, 16, 28, 29, 40 and 56-64 under 35 U.S.C. § 102(b), as being clearly anticipated by Ishii. Claim 1, as amended, states:

1. An electronically tuned circuit, comprising a power amplifier coupled to an electronically tunable output network, said power amplifier capable of being operated in a large-signal mode, said output network including an electronically tunable reactive component, a control line, and a control input, wherein said control input is connected to a time varying tuning input signal, wherein electronic tuning of said electronically tunable reactive component includes non-motor operated electronic tuning when said power amplifier is operated in said large-signal mode, wherein said control line extends to said electronically tunable reactive component for providing a control signal derived from said time varying tuning input signal, wherein said control signal varies over more than two values for electronically varying reactance of said electronically tunable reactive component over more than two values, wherein said time varying tuning input signal is independent of a signal amplified by said power amplifier.

Independent claims 40 and 56 have been similarly amended.

Applicant would respectfully ask the Examiner to consider that Ishii does not teach or suggest that "said time varying tuning input signal is independent of a signal amplified by said power amplifier," as provided in claims 1, 40, and 56, as amended. Ishii has a tuning input signal on the control line that depends on a signal amplified by the power amplifier (column 3, line 49-63).

Ishii is using this scheme to reduce distortion as described in column 2, lines 12-17 and column 2, lines 47-50. This purpose requires the time varying tuning input signal to be dependent on and determined by a signal amplified by the power amplifier. It would be defeated if the time varying tuning input signal is independent of a signal amplified by the power amplifier.

Therefore the rejection of claims 1, 40, and 56, and claims dependent thereon, including claims 2-5, 7, 13, 15, 16, 28, 29, and 57-64 under 35 U.S.C. § 102(b), as being anticipated by Ishii has been traversed.

Claim Rejections-- 35 U.S.C. § 103(a)

The Examiner rejects claims 6, 8, 9, 14, 17-19, 30-34 36-38, and 41-46 under 35 U.S.C. § 103(a), as being unpatentable over Ishii. Applicant would respectfully ask the Examiner to consider that independent claims 1, 40, and 56, include the limit, "said time varying tuning input signal is independent of a signal amplified by said power amplifier."

Ishii does not teach or suggest that "said time varying tuning input signal is independent of a signal amplified by said power amplifier," as provided in claims 1, 40, and 56, as amended. Ishii has a tuning input signal on the control line that depends on a signal amplified by the power amplifier (column 3, line 49-63).

Ishii is using this scheme to reduce distortion as described in column 2, lines 12-17 and column 2, lines 47-50. This purpose requires the time varying tuning input signal to be dependent on and determined by a signal amplified by the power amplifier. It would be defeated if the time varying tuning input signal is independent of a signal amplified by the power amplifier.

Thus, the rejection of claims 1 and 40, and claims dependent thereon, including claims 6, 8, 9, 14, 17-19, 30-34 36-38, and 41-46, under 35 U.S.C. § 103(a), as being unpatentable over Ishii has been traversed.

Entrance of the Amendment After Final

Applicant requests that the amendment after final be entered. The amendment overcomes the rejections and places the application in condition for allowance.

The Examiner has searched the prior art many times during the course of this extended prosecution. The present amendment makes clearer what was already intended in the claims. In view of the multiple searches already conducted Applicant asks the Examiner to consider that no further extensive searching is required, only the searching

the Examiner would normally do before issuing a notice of allowance.

Applicant would further ask the Examiner to consider that the idea of providing an electronically tunable reactance in the output of a power amplifier has already been addressed in Response D, dated October 25, 2002. The Examiner then suggested combining Sokal 3,919,656 with Shenai, 5,914,513. Sokal does not mention using an electronically tunable output network that includes an electronically tunable reactive component. Sokal's reactive component is likely mechanically tuned so its capacitance would be independent of the applied voltage. Applicant provided several books showing that it would not be obvious to one of ordinary skill in the art to replace the mechanically tuned reactance of Sokal in a large signal case with the electronically tunable capacitor of Shenai because the electronically tunable capacitance introduces a capacitance that varies with the applied voltage. For a large signal the voltage varies widely and using an electronically tuned reactance would therefore introduce distortion.

Applicant would ask the Examiner to review Response D where there is an extensive discussion including description and listing of books that either teach against the combination or only teach or suggest the combination for small signal applications. The same argument that applied to the electronically tunable capacitor of Sokal also applies to the electronically tunable capacitance provided by Ishii. Since this line of rejection has already been covered no extensive consideration or new extensive searching is now required. Applicant would therefore respectfully ask that the amendment be entered, and the case pass to issuance. Thanks very much for considering this.

It is believed that the claims are in condition for allowance. Therefore, applicant respectfully requests favorable reconsideration. If there are any questions please call applicant's attorney at 802 864-1575.

respectfully submitted,

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